

**Validation Metrics -**  
**Update**  
**CDM/ISEA Validation Working**  
**Group**  
**Apr 2003**

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Metrics  
Status  
-  
Round 1  
-  
Completed

**Avail Dates:**  
**1998-1999**

- **Workfiles received; 24 month analysis complete**
  - USS Normandy (CG 60)
  - USS Anzio (CG 68)
  - USS Port Royal (CG 73)
  - USS Hewitt (DD 966)
  - USS Caron (DD 970) - completed 18 mo analysis/decom Oct 01
  - USS Laboon (DDG 58)
  - USS Russell (DDG 59)
  - USS Milius (DDG 69)
  - USS Boone (FFG 28)
  - USS Austin (LPD 4)
  - USS Duluth (LPD 6)
- **Workfiles requested:**
  - USS Tarawa (LHA 1) - NNSY - funding?
  - USS Saipan (LHA 2) - NNSY - funding?
  - USS Ashland (LSD 48) - Boston - workfile parameters forwarded 7/01
- **Workfiles not available:**
  - USS Dallas (SSN 700)

# Metrics Status

-

## Round 2

-

## In Progress

**Avail Dates:**  
**2001-2002**

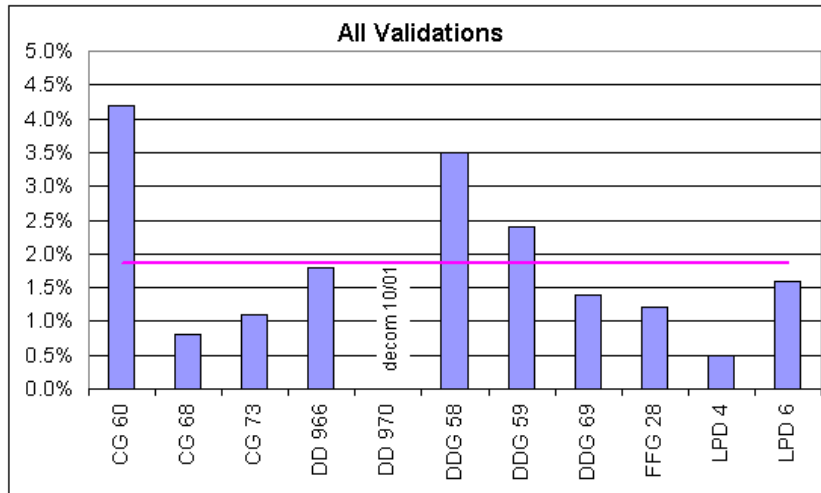
- **Proposal - Apr 02**
  - Re-run metrics with new group of ships to measure impact of policy/procedural changes
    - RMMCO
    - Standardized SSVA procedures
    - CILS-TAT vs non-CILS-TAT ships
    - NEMAIS Phase A
- **Workfiles received**
  - USS Bunker Hill (CG 52) - completed 12 mo
  - USS San Jacinto (CG 56) - completed 12 mo
  - USS Shiloh (CG 67) - completed 18 mo
  - USS Donald Cook (DDG 75) - completed 18 mo
  - USS Saipan (LHA 2) - completed 6 mo
- **Workfiles requested:**
  - USS Duluth (LPD 6) - NSLC Jax - no response

# **Validation Metrics:**

- **Supply: matched Supply Issue APL to Validated APL for Adds & RIC Changes**
  - **Allowance Effectiveness**
    - Allowance Effectiveness measures the % of parts that were issued for maintenance that had an allowance in the ship's SRF in SNAP.
    - Significance: indicates how well the allowance product is supporting maintenance actions
    - Configuration accuracy is a key driving factor in maintaining correct allowances on-board ship.
  - **Volume of 'G' Source Codes**
    - Definition of a 'G' source code: 'Not Carried' repair part issued for maintenance which is not listed on an APL in the ship's COS file in SNAP.
    - Significance: causes for a 'G' source coded issues are configuration inaccuracies and/or provisioning problems

# Supply Metrics - Round 1

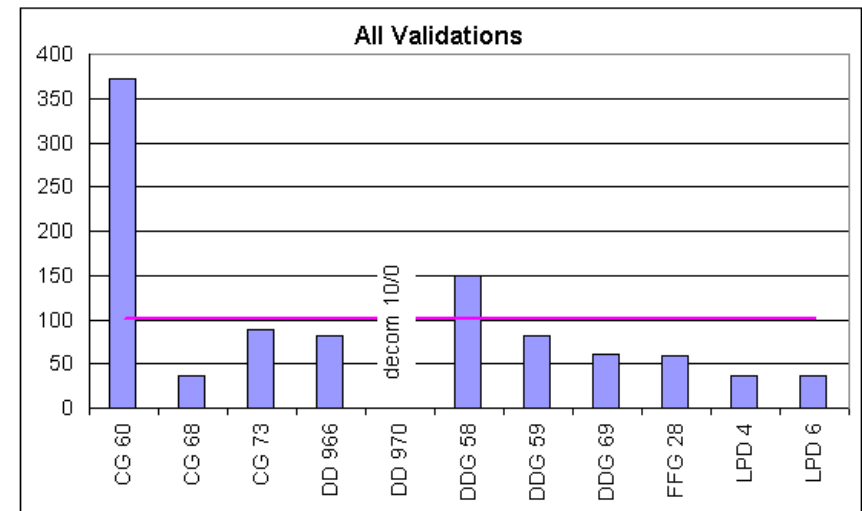
Improvement in Allowance Effectiveness - 24 Month Measurement



- Average at 24 months: potential 1.9% increase in Allowance Effectiveness
- Average Allowance Effectiveness for total Fleet is around 74%

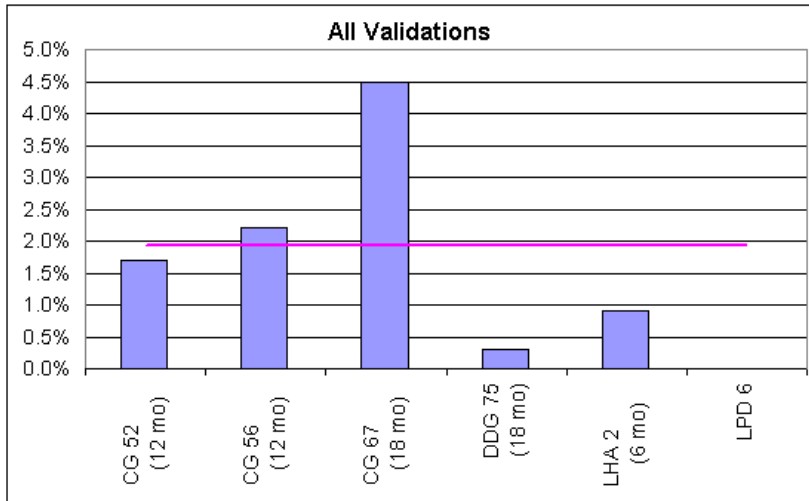
- Average at 24 months: potential 100 'G' source coded issues avoided
- Avg. 'G' source code count per ship in fleet for 18 month cycle is approx. 150

Potential G Source Coded Issues Avoided - 24 Month Measurement



# Supply Metrics - Round 2

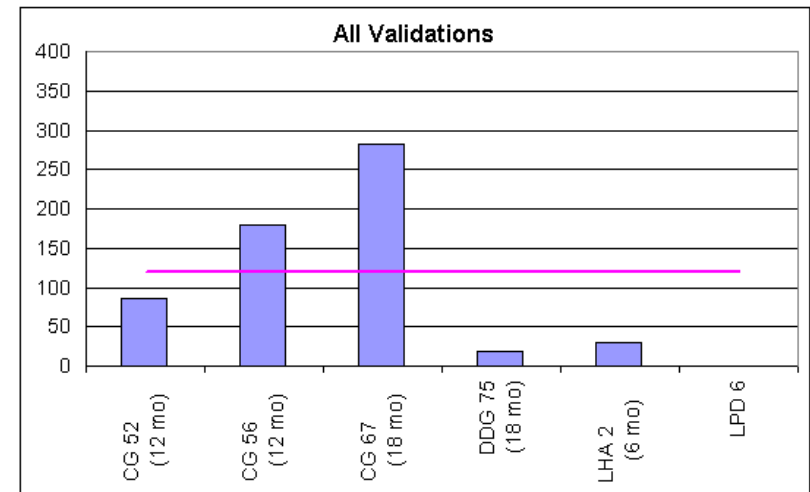
Round 2 - Improvement in Allowance Effectiveness



- Average to date: potential 1.9% increase in Allowance Effectiveness
- Average Allowance Effectiveness for total Fleet is around 74%

- Average to date: potential 119 'G' source coded issues avoided
- Avg. 'G' source code count per ship in fleet for 18 month cycle is approx. 150

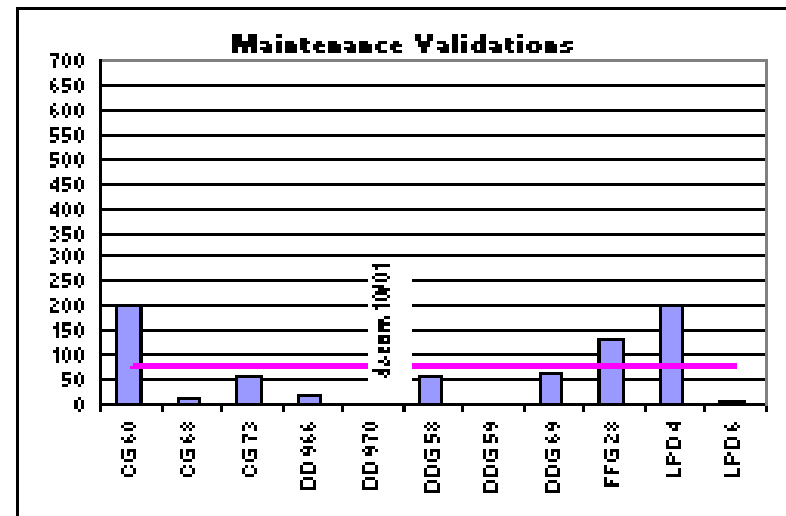
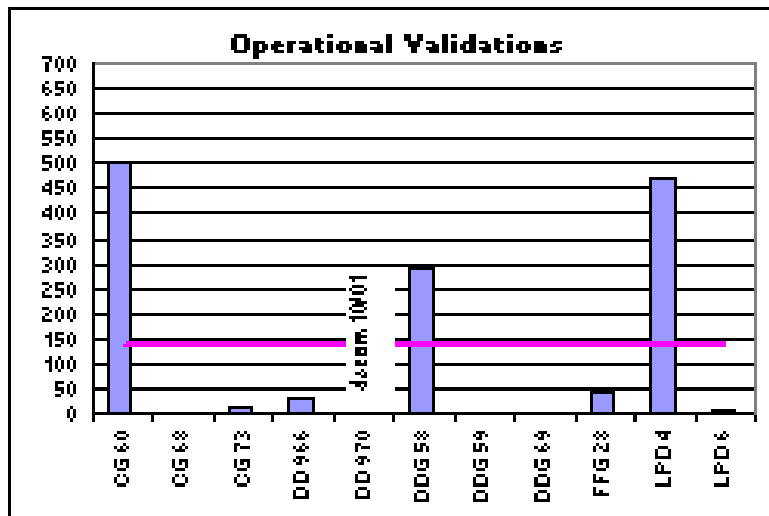
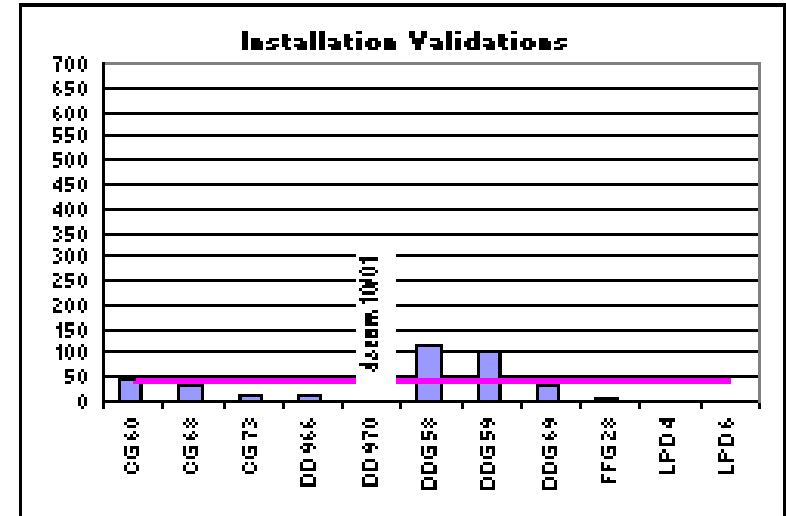
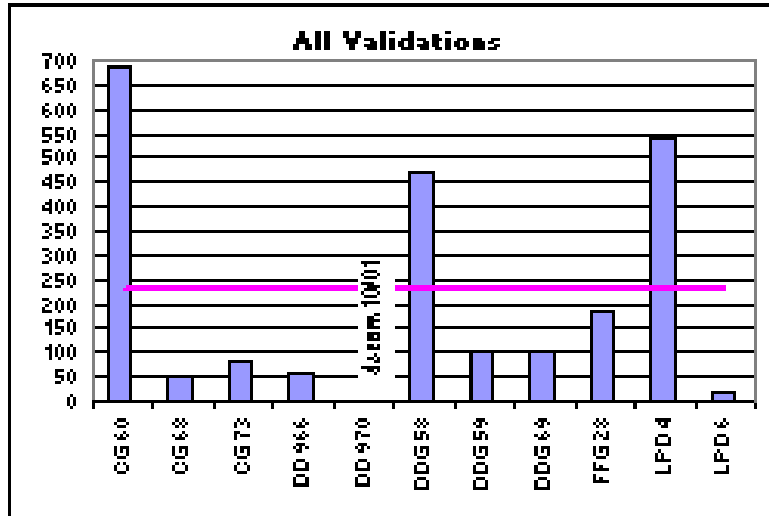
Round 2 - Potential G Source Coded Issues



# **Validation Metrics:**

- **Maintenance: matched Maintenance APL and CDM RIN to Validated APL and RIN for Adds & RIC Changes**
  - **Number of Maintenance Actions**
    - Volume (count) of maintenance actions that were reported against validated APL adds/RIC changes
    - Significance: How much actual maintenance did validations impact?
  - **% of Total Maintenance Actions**
    - Percentage of total maintenance actions reported against validated APL adds/RIC changes
    - Calculated: (Number of maintenance actions reported against APL adds/RIC changes) / Total number of maintenance actions
    - Significance: How much of the ships' overall maintenance were impacted by validations?
  - **% of Validated RICs**
    - Percentage of validated APL adds/RIC Changes that had subsequent maintenance performed
    - Calculated: (Number of validated APL adds/RIC changes with follow-on maintenance) / (Total number of APL adds/RIC changes)
    - Significance: How successful were validations from a maintenance perspective?

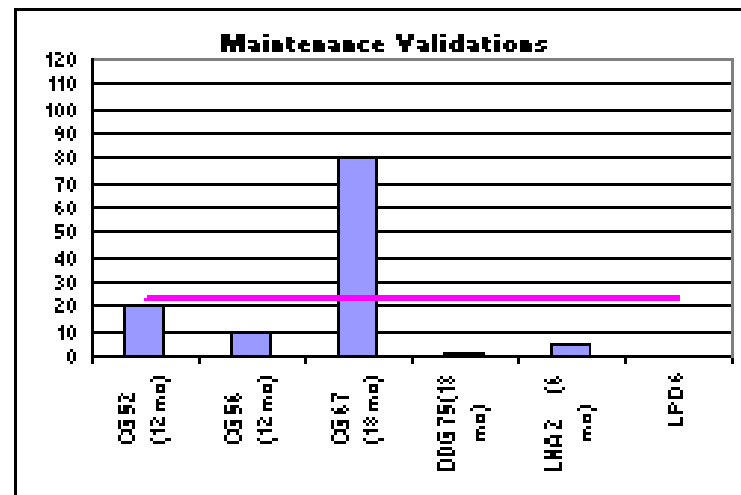
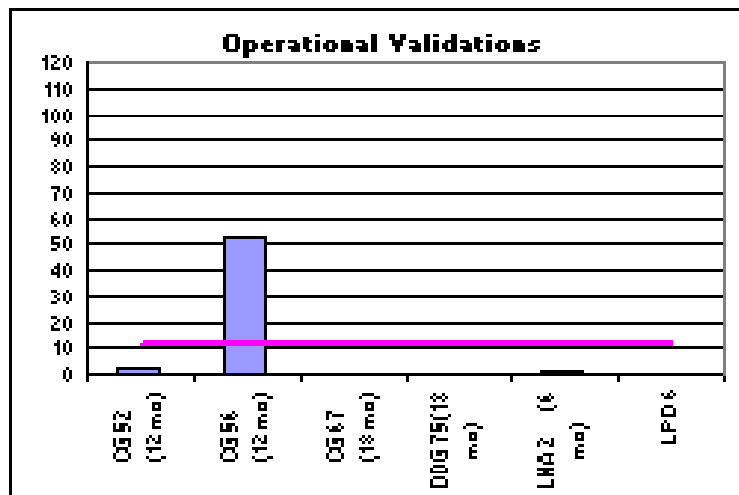
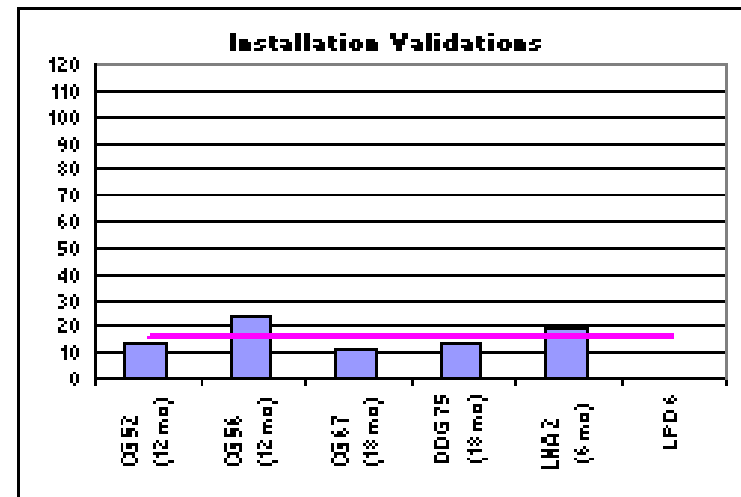
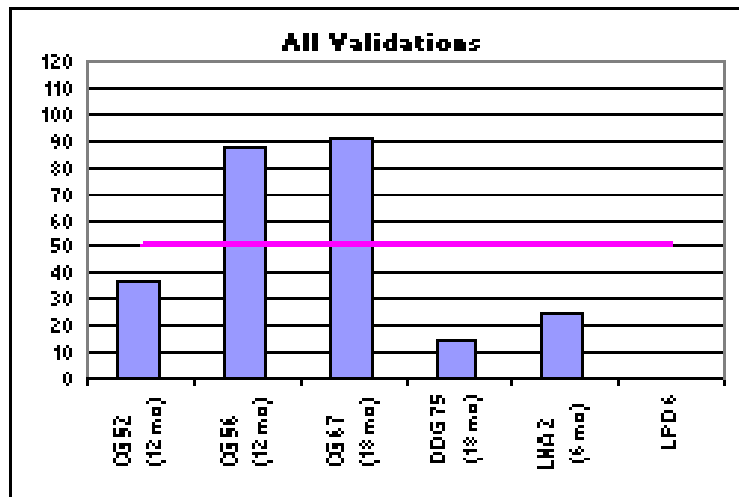
## # Maint Actions for Validated RICs - 24 Month Measurement



- Average at 24 months: 229 unique JCNs
- Avg. # maint actions for a ship in the fleet per 18 month cycle: 4 950

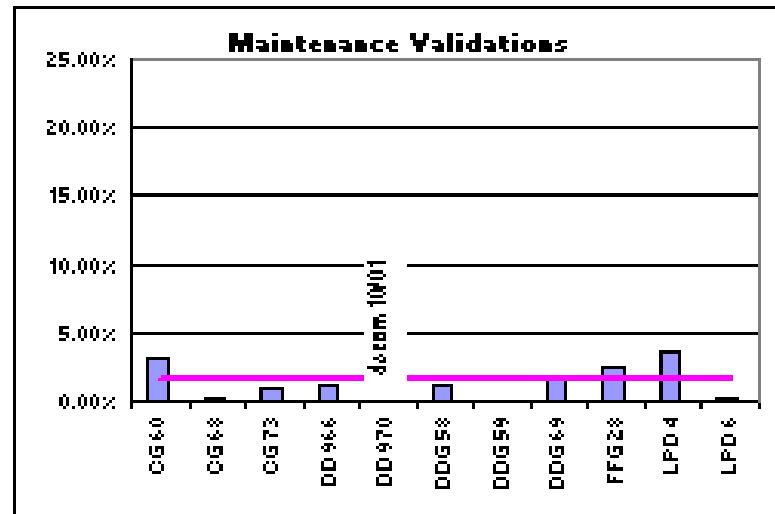
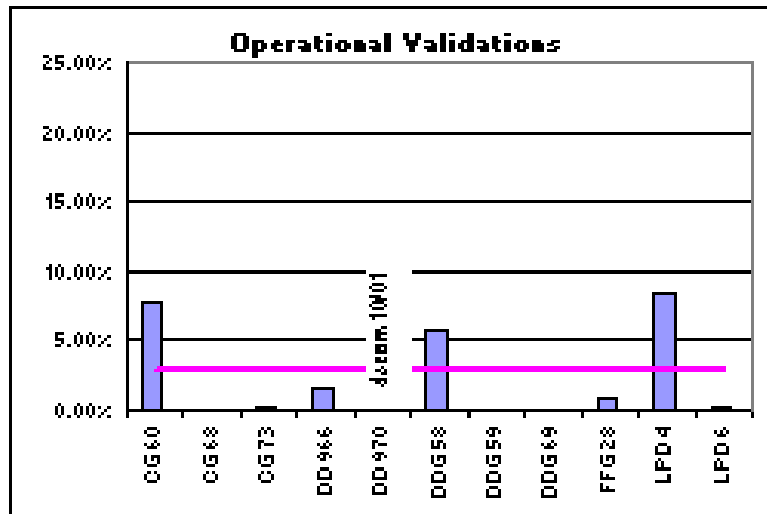
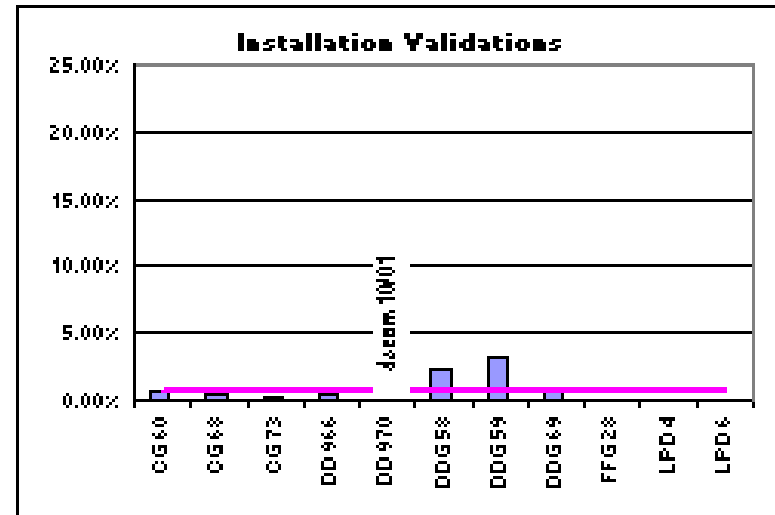
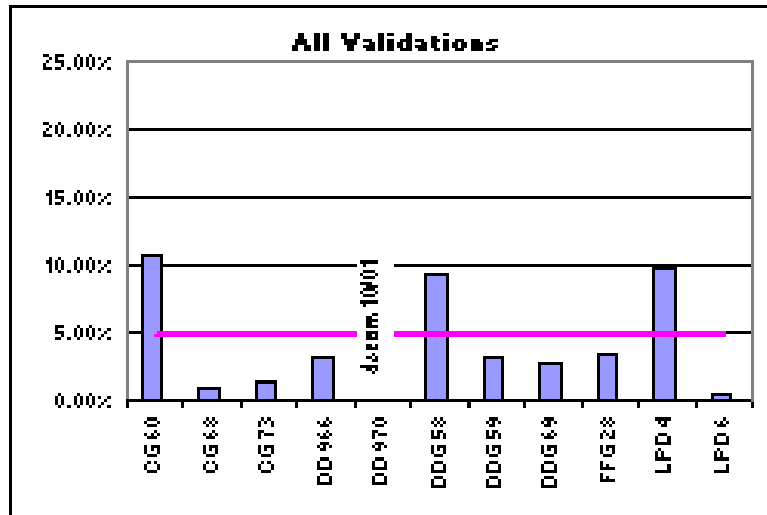


## Round 2 - # Maint Actions for Validated RICs



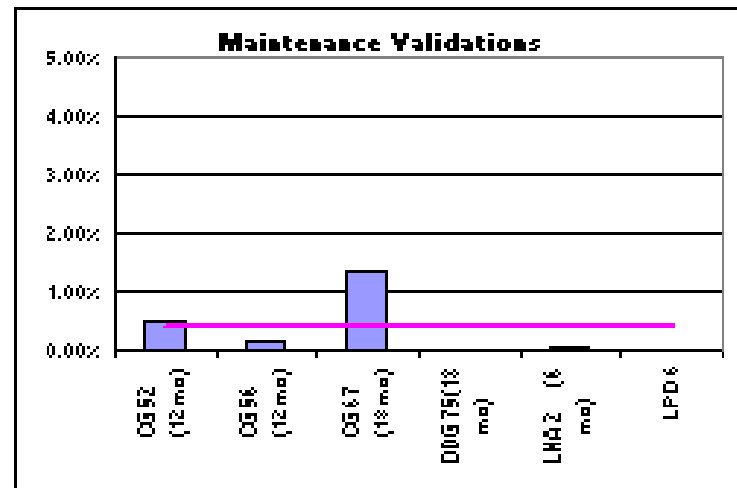
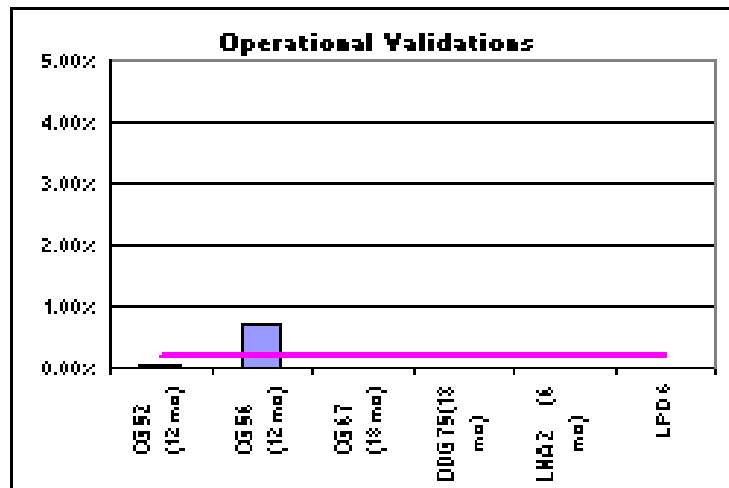
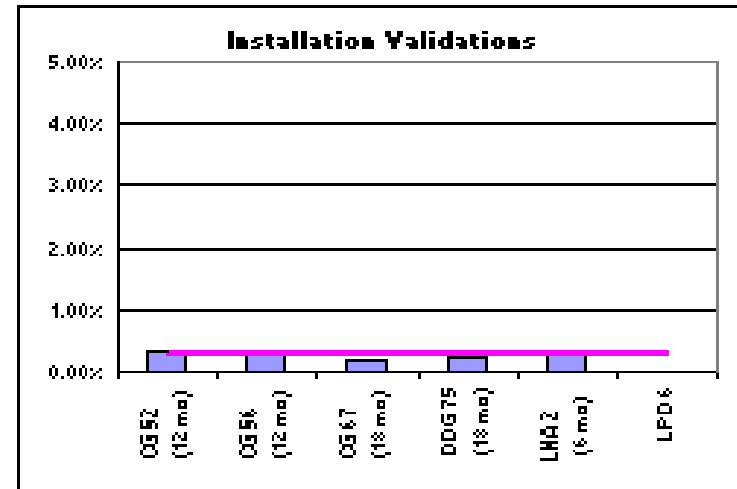
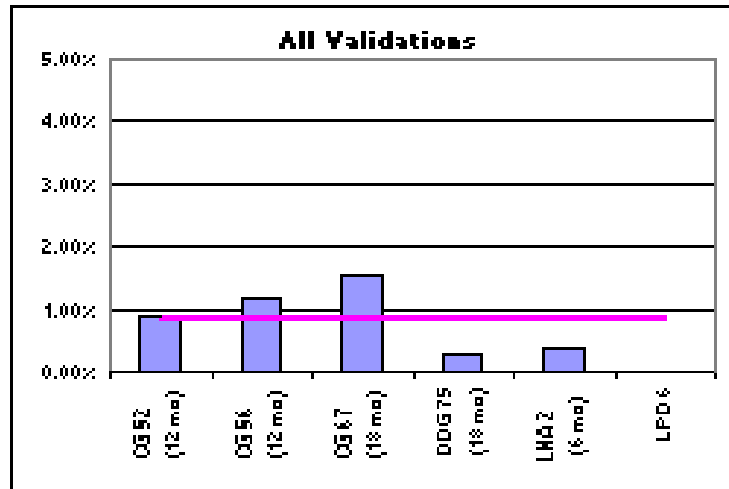
- Average to date: 51 unique JCNs
- Avg. # maint actions for a ship in the fleet per 18 month cycle: 4 950

## % of Total Maint Actions for Validated RICs - 24 Month Measurement



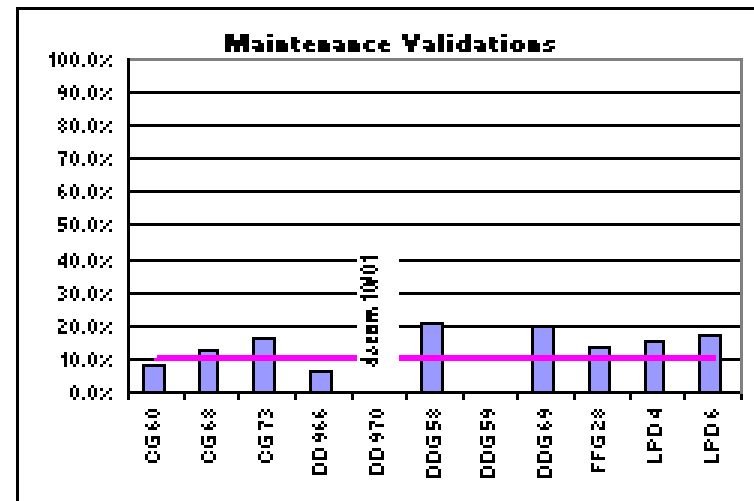
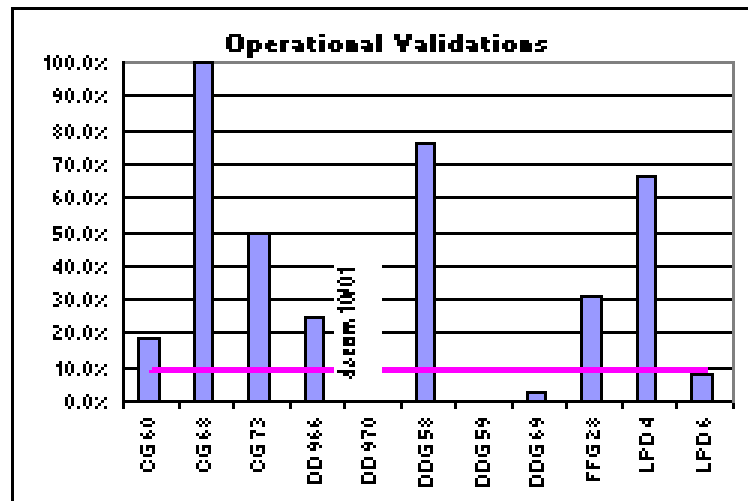
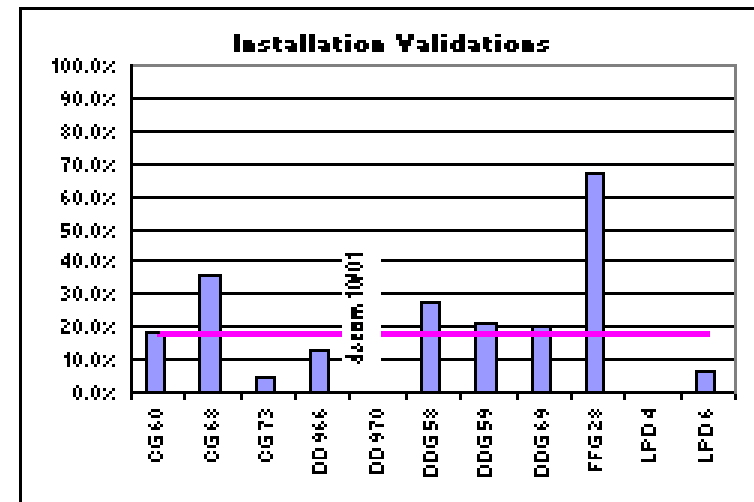
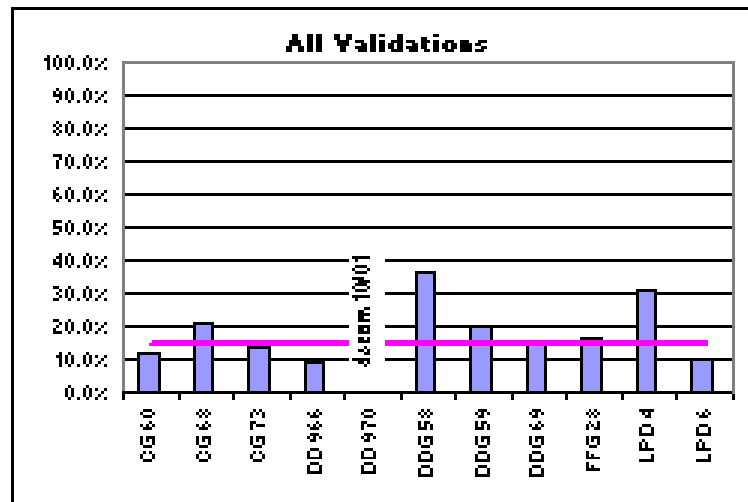
- Average number of maintenance transactions per ship for an 18 mo period = 4,950
- Average % of Total Maintenance Actions reported against Validated RICs = 4.88%

## Round 2 - % of Total Maint Actions for Validated RICs



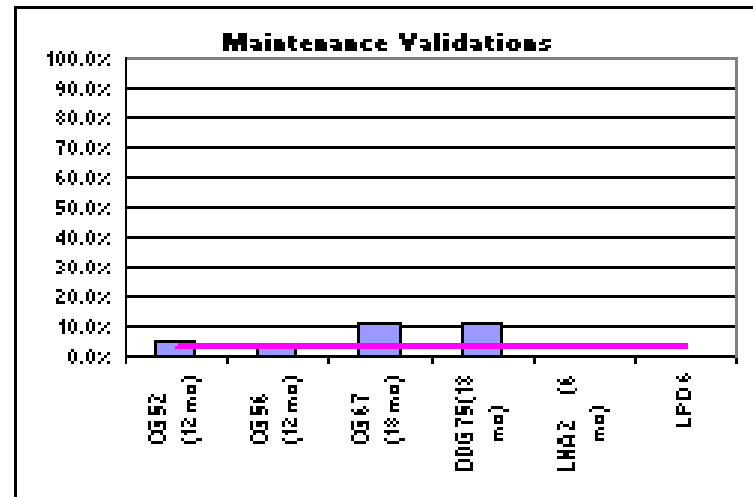
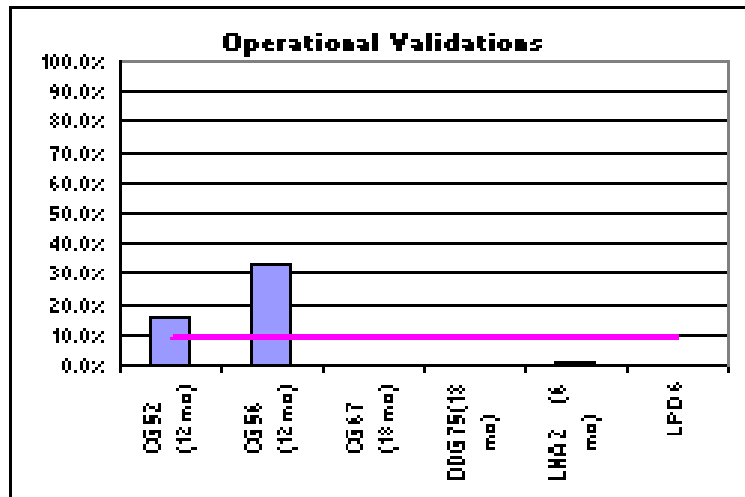
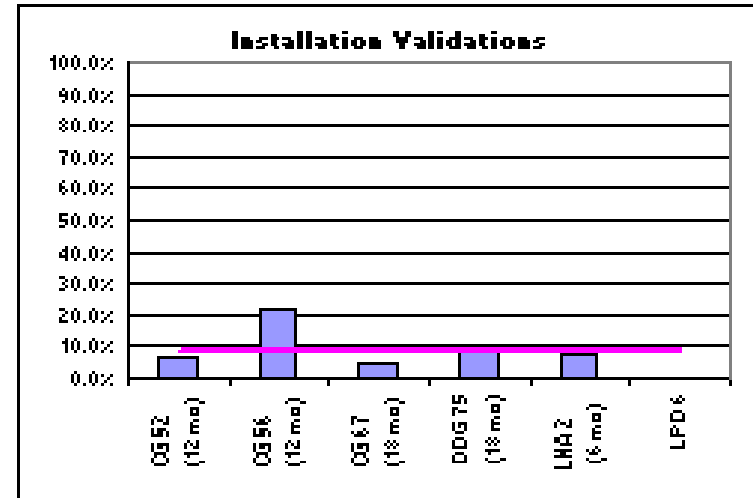
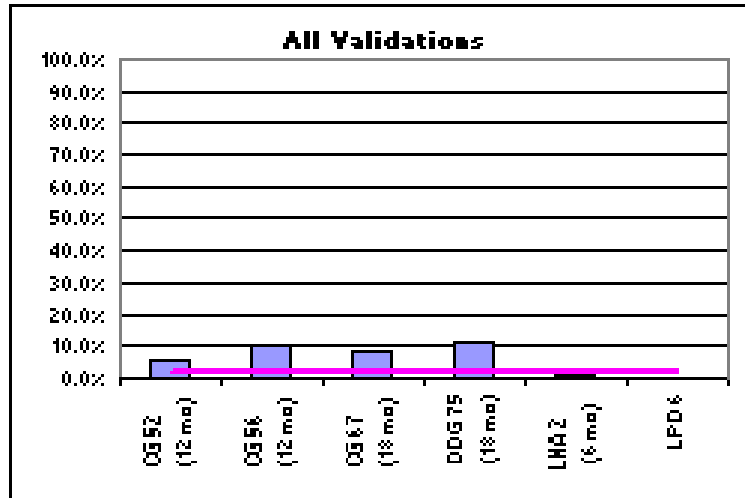
- Average number of maintenance transactions per ship for an 18 mo period = 4,950
- Average % of Total Maintenance Actions reported against Validated RICs = 85%

## % Validated RICs with Follow-on Maint Actions- 24 Month Measurement



- Average % of Validated RICs showing follow-on validations = 14.9%
- 85.1% of all validations have no follow-on maintenance actions

## Round 2 - % Validated RICs with Follow-on Maint Actions



- Average % of Validated RICs showing follow-on validations to date = 2.2%
- 97.8% of all validations have had no follow-on maintenance

# Metrics - Putting it all together

Metric		Round 1 Average	Round 2 Average (to date)	Avg per ship per 18 mo cycle
Supply	Effectiveness	+1.9%	+1.9%	~ 74%
	G' Source Code	100 avoided	119 avoided	~ 150
Maintenance	# Maintenance Actions	229 JCNs	51 JCNs	~ 4,950
	% of Total Maintenance Actions	4.88%	0.85%	
	% of Validated RICs	14.9%	2.2%	

- Need to finish collecting data for 2nd round of metrics before making conclusions about process changes
  - Have we standardized processes?
  - Have we made the processes better?
- Need to think about the significance of what we are measuring
  - Are we measuring the “right” things? For the right reasons?
  - How do we tie all this together?
  - What is “good” and what is “bad”? Are we really helping the fleet?
- Equipment Downtime/Customer Wait Time (CWT) Avoidance?
  - CWT is currently the OPNAV preferred readiness metric
    - Part of Ao equation - measures how long the maintainer has to wait for a requested part
  - Can be calculated using 3M or CASREP data
    - (Date last part was received) - (Date first part was demanded)